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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,959	11/10/2003	Richard Robert Trewin	134914-1	2958

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,959

Applicant(s)

TREWIN ET AL.

Examiner

Igor Kershteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) 1-56 and 72-76 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67-71 is/are allowed.
- 6) ☒ Claim(s) 57, 58, 60-63 and 66 is/are rejected.
- 7) ☒ Claim(s) 59, 64 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/10/03, 03/16/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention:

- Species 1, claims 10-15, figures 1-4,
- Species 2, claims 16-26, figures 5 and 6,
- Species 3, claims 27-32, figures 7 and 8,
- Species 4, claims 33-37, figures 9 and 10,
- Species 5, claims 28-47, figure 11,
- Species 6, claims 48-56, figures 12 and 13,
- Species 7, claims 57-72, figures 14 and 15,
- Species 8, claims 73-76, figures 16 and 17.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

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Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Ms. Ann Agosti (Reg. No. 37,372) on 6/02/05 a provisional election was made with traverse to prosecute the invention of species 7, claims 57-72. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-56, and 72-72 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claim 62 is objected to because of the following informalities:

In line 2, "seal" should be --sealed--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 57, 58, 60, 62, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane (2,549,819) in view of Hayton (5,129,783).

In figures 1, 2, and 6, and in the claim, Kane teaches an apparatus for distributing a fluid in a gas flow path inside a turbomachine, the apparatus comprising: at least one stage of a turbomachine, the stage comprising a 360 degree casing 11 and at least one stator blade 30 extending radially from an inner surface of the casing 11; a stator blade cavity 31 located at an interior of the stator blade 30 and in fluid communication with the casing 11, a port 23 located at the casing 11, at least one atomizer with at least one orifice 32 located at an orifice surface of the stator blade 30, the orifice 32 in fluid communication with the stator blade cavity 31.

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Kane does not explicitly teach a casing groove located at the inner surface of the casing, the casing groove extends for the entire 360 degrees of the inner surface of the casing, wherein the interface between the at least one stator blade and the casing is sealed with a static seal, wherein the casing groove between adjacent stator blades are seal with a static seal.

Hayton, in figure 4, teaches a turbomachine having a casing 20 with a casing groove (not numbered) located at the inner surface of the casing 20, the casing groove extends for the entire 360 degrees of the inner surface of the casing 20, wherein the interface between the at least one stator blade 22 and the casing 20 is sealed with a static seal 84,94, wherein the casing groove between adjacent stator blades are sealed with a static seal 84,94.

Since Kane and Hayton are analogous art because they are from the same field of endeavor, that is the gas turbine engine art, and because Kane does not explicitly teaches the embodiment of connection between the casing and the vane, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the connection between the casing and the vane of Kane with the casing groove located at the inner surface of the casing, extending the entire 360 degrees, wherein interface between the stator blade and the casing is sealed with the static seal and the casing groove between adjacent stator blades are sealed with the static seal as taught by Hayton for the purpose of mounting the stator blade to the casing and providing leak free interface between the casing and the stator blade.

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Claims 61 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane (2,549,819) as modified by Hayton (5,129,783), further in view of Steinetz et al. (6,446,979).

Kane as modified by Hayton teaches all the claimed subject matter except that he doesn't teach the static seal is a rope seal.

Steinetz et al. in column 8, lines 43-45, teaches a static seal used in the turbomachine, the static seal is a rope seal.

Since Kane as modified by Hayton and Steinetz et al. are analogous art because they are from the same field of endeavor, that is the turbomachine seals art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the static seal of Kane as modified by Hayton with the rope seal as taught by Steinetz et al. for the purpose of providing a static seal with an improved characteristics such as flexibility, integrity and reliability.

Allowable Subject Matter

Claims 67-72 are allowed.

Claims 59, 64, and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of four patents.

Walsh (2,945,290) is cited to show a turbomachine casing having a groove for excepting a stator vane but fails to teach a stator vane cavity, a port and an orifice.

Olsen et al. (5,630,700) is cited to show a turbomachine having a casing, a stator vane, a cavity in the vane, an orifice in flow communication with the cavity, but fails to teach a groove in an inner surface of the casing.

Bertrand et al. (6,890,151) is cited to show a turbomachine casing having a groove for excepting a stator vane but fails to teach a stator vane cavity, a port and an orifice.

Murphy et al. (Patent Publication No. US 20040115046A1) is cited to show a turbomachine having a casing, a stator vane, a groove in an inner surface of the casing but fails to teach a cavity in the vane, and an orifice in flow communication with the cavity.

Contact information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK
June 6, 2005

A handwritten signature in black ink, appearing to read 'Igor Kershteyn', written in a cursive style.

Igor Kershteyn
Patent examiner.
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